T E C H N I C A L M E M O R A N D U M

Utah Coal Regulatory Program

August 26, 2005

TO: Internal File

THRU: Peter H. Hess, Environmental Scientist III/Engineering, Team Lead

FROM: Priscilla W. Burton, Environmental Scientist III/Soils

RE: Degasification Wells G-8, G-9, G-10, Canyon Fuel Company, LLC., Dugout Canyon Mine, C/007/039, Task ID #2280

SUMMARY:

The submittal, received on, May 19, 2005, expands the Methane Degasification Amendment Volume to include degas wells G-8, G-9, and G-10. Together, they add an additional 4.8 acres of disturbance to the plateau above Pace Canyon (locations described in Table 1-1 and shown on Plate 1-4. G-8 is in section 24 (along with G-1 through G-7). G-9 and G-10 are 2 miles to the east.

Attachment 2-1 of the Degas Well Volume of the MRP contains baseline survey information gathered from the sites. As with previous well sites, the plan indicates that salvaged soil will sampled for analysis of baseline parameters at the time of disturbance (Section 243).

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

Appendix 2-2 of the MRP provides a general outlook on the soils of the Book Cliffs in the vicinity of the Dugout Mine. Figure 1-1 and Plate 1-4 shows the location of the degas wells.

The specific soils information for degasification well sites G-2 through G-13 is found in Attachment 2-1 of the Methane Degasification Amendment of the MRP.

As with previous degas wells, the Permittee will sample the topsoil at sites G-8 – G-10 at the time of disturbance, to collect baseline soil chemistry information which will be included in Attachment 2-1. The following parameters will be sampled during soil salvage: Texture (particle size analysis), pH, Electrical Conductivity, Sodium Adsorption Ratio, percent $CaCO_3$, plant available Nitrogen, Potassium, and Phosphorus (Section 243).

Site G-3, G-7, G-10 are classified as Typic Argiustoll soil type (in the Beje-Trag complex map unit in the 1988 Soil Survey of Carbon County Utah). Site G-4, G-5, G-6, and G-9 are classified as Pachic Argicryoll soil type (the Midfork-Commodore complex map unit in the 1988 Carbon Co. Soil Survey).

Site G-8 is classified as Typic Ustorthent soil type (Croydon Loam in the 1988 Soil Survey of Carbon County Utah, see Section 222.200 and Attachment 2-1).

The sites are located at approximately 8,000 ft (see Fig 1-1 and Plate 1.4). The site descriptions, drawings, and photographs are in Attachment 2-1. Some of the sites were previously disturbed by logging (Table 3-1, pg 3-16, Attachment 2-1 section 4.3). Soil sample analyses are found in Attachment 2-1.

All Sites:

Soils were not analyzed during the topsoil survey. The application indicates that the topsoil from all sites will be analyzed for the following parameters during soil salvage: Texture (particle size analysis), pH, Electrical Conductivity, Sodium Adsorption Ratio, percent $CaCO_3$, plant available Nitrogen, Potassium, and Phosphorus (Section 243).

Findings:

A commitment to have a qualified soil scientist gather site specific information just prior to development of site G-7 such as the slope, topsoil depth and depth to lithic contact is included in the plan and will be provided to the Division.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

Sites G-8 through G-10:

Site configurations are provided in Attachment 5-1. Disturbed acreage for each well site is tallied in Table 1-2; however, topsoil will not be salvaged from beneath the topsoil storage area. Topsoil salvage areas vary from 0.3 acres at site G-8 to one acre (sites G-9 and G-10, see Attachment 2-2). Topsoil removal is outlined in Table 2-1 and Section 222.400. At sites G-8 and G-9 the surface foot of subsoil/topsoil will be salvaged and stored in a stockpile. An average of eighteen inches is planned for salvaged from site G-10. Resulting stockpile volumes are provided in Table 2-1 and approximate dimensions are listed in Table 2-2. Stockpiles are constructed against the slope; therefore, height measurements reflect the original ground surface.

Findings:

The information provided meets the requirements of the Regulations.

RECOMMENDATIONS:

The Permittee has committed to sampling and analysis of the sites for baseline topsoil information including depth and profile information from all sites during development. Topsoil samples will be taken and will be analyzed for the following parameters during soil salvage: Texture (particle size analysis), pH, Electrical Conductivity, Sodium Adsorption Ratio, percent $CaCO_3$, plant available Nitrogen, Potassium, and Phosphorus (Section 243). The information gained from this analysis will be added to Attachment 2-1 of the MRP as it is obtained, along with quantities of topsoil salvaged.

The application is recommended for approval.